

# Notice of Allowability

Application No.

09/474,643

Examiner

Beth Van Doren

Applicant(s)

HAYNES ET AL.

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## -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the petition received 05/10/2006 and granted on 07/17/2006.
2. ☒ The allowed claim(s) is/are 2-6,9-11,13-16,18-22,24,25,27,30 and 31.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All b) ☐ Some\* c) ☐ None of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

### Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material

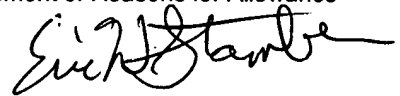
5. ☐ Notice of Informal Patent Application (PTO-152)

6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_.

7. ☒ Examiner's Amendment/Comment

8. ☒ Examiner's Statement of Reasons for Allowance

9. ☐ Other \_\_\_\_\_

  
**ERIC W. STAMBER**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 3600**

### **DETAILED ACTION**

1. The following communications is in response to the petition filed 05/10/2006. The communications below contains the Reasons for Allowance and the Examiner's Amendment issued in response to the communications received 09/29/2005. Claims 1-2, 11, 30, and 31 were amended in this communication. Claims 1-7, 9-11, 13-25, and 27-31 were pending in the communications filed 09/29/2005. This current action includes an Examiner's Amendment, by which claims 1, 7, 17, 23, 28, and 29 have been canceled and claims 2-5, 9-11, 13, 16, 18-22, 30, and 31 have been amended (see below). Therefore, claims 2-6, 9-11, 13-16, 18-22, 24-25, 27, and 30-31 are currently pending and are allowed.

#### ***Examiner's Amendment***

2. An examiner's amendment to the record appears below. Should the changes be unacceptable to the applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Roger T. Frost on December 9, 2005. The application has been amended as follows:

#### **In the claims:**

Please **cancel claims 1, 7, 17, 23, 28, and 29.**

Please amend the dependency of **claims 2-5, 9-10, and 18-22.** In each instance, please replace the limitation "The method of Claim 1" with the limitation --The method of Claim 30--.

As per **claim 11**, please make the following amendments:

11. A system for eliminating unnecessary dispatches, comprising:

a service order control system[ operative to]:

receiving [receive] service requests from a source; and

generating [generate] a service order based on one of the service requests from the source;

a work management center[ operative to]:

receiving [receive] the service order from the service order control system;

determining that [determine whether] the service order requires a dispatch of a service technician; and

in response to determining that [if] the service order requires a dispatch, generate a dispatch order corresponding to the service order for the dispatch and place the dispatch order in a queue for execution; and

a trap service order system[ operative to]:

receiving [receive] a duplicate of the service order from the service control system;

after the work management center places the dispatch order in a queue for execution,

determining [determine] whether the service order requires a dispatch of a service technician;

selecting [select] a set of predefined criteria for determining whether the service order is likely to cause an unnecessary dispatch based on the source of the service request associated with the service order;

in response to determining that [if] the service order requires a dispatch, determine whether the service order meets a set of predefined criteria that indicate the service order is likely to cause an unnecessary dispatch;

in response to determining that [if] the service order meets the set of predefined criteria, then further examine the service order to determine whether the dispatch is unnecessary;

in response to determining that [if] the dispatch is unnecessary, then determine whether the dispatch of a service technician associated with the dispatch order in the queue is scheduled to occur within a predetermined time period;

in response to determining that [if] the dispatch is scheduled to occur within the predetermined time period, then communicate with the work management center to place the dispatch order on hold.

As per **claim 13**, please make the following amendments:

13. The system of claim 11, further comprising a loop facility assignment control system [for] receiving the service order and for assigning facilities [for] the service order, wherein if the trap service order system determines that the dispatch is unnecessary, then the trap service order system communicates with the loop facility assignment control system to update a database in the loop facility assignment control system.

As per **claim 16**, please make the following amendments:

16. The system of claim 11, wherein the trap service order system [is operative to identify] identifies all service orders that require a dispatch and that meet a set of predefined criteria.

As per **claim 30**, please make the following amendments

30. A method for eliminating an unnecessary dispatch of a service technician, comprising:  
receiving a service order at a work management center, wherein the service order is  
generated from a service request sent by a source;

determining, at the work management center, that [whether] the service order requires a  
dispatch of a service technician;

responsive to determining that [if] the service order requires a dispatch of a service  
technician, [then] generating a dispatch order for the dispatch of a service technician and placing  
the dispatch order in a queue for execution;

receiving a duplicate of the service order at a trap service order system;

after the dispatch order is placed in the queue for execution, [then] determining at the trap  
service order system, whether the service order requires a dispatch of a service technician;

selecting a set of predefined criteria for determining whether the service order is likely to  
cause an unnecessary dispatch based on the source of the service request associated with the  
service order;

responsive to determining that [if] the service order requires a dispatch of a service  
technician, [then] determining, at the trap service order system, whether the service order meets  
the set of predefined criteria that indicates a likelihood of an unnecessary dispatch by examining  
selected sections of the service order;

responsive to determining that [if] the service order meets the set of predefined criteria,  
[then] determining, at the trap service order system, whether the dispatch is unnecessary;

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responsive to determining that [if] the dispatch is unnecessary, [then] determining at the trap service order system, whether the dispatch associated with the service order in the queue is scheduled to occur within a predetermined time period;

responsive to determining that [if] the dispatch is scheduled to occur within a predetermined time period[,]:

placing the dispatch order in the queue on hold;

generating a corrected service order;

determining whether the corrected service order corresponds to the dispatch order generated in response to the service order; and

responsive to determining that [if] the corrected service order corresponds to the dispatch order, [then] canceling the dispatch order.

As per **claim 31**, please make the following amendments

31. A system for eliminating unnecessary dispatches, comprising:

a service order control system[ operative to]:

receiving [receive] service requests from a source;

generating [generate] a service order based on one of the service requests from the source; and

generating [generate] a corrected service order in response to a communication from a trap service order system;

a work management center[ operative to]:

receiving [receive] the service order from the service order control system;

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determining that [determine whether] the service order requires a dispatch of a service technician;

in response to determining that [if] the service order requires a dispatch of a service technician, generating [then generate] a dispatch order for the dispatch and place the dispatch order in a queue for execution;

receiving [receive] the corrected service order from the service order control system;

determining [determine] whether the corrected service order corresponds to the dispatch order; and

in response to determining that [if] the corrected service order corresponds to the dispatch order, [then cancel] canceling the dispatch order; and

the trap service order system[ operative to]:

receiving [receive] a duplicate of the service order from the service control system;

after the work management center places the dispatch order in the queue for execution, determining [determine] whether the service order requires a dispatch of a service technician;

selecting [select] a set of predefined criteria for determining whether the service order is likely to cause an unnecessary dispatch based on the source of the service request associated with the service order;

in response to determining that [if] the service order requires the dispatch of the service technician, [then compare] comparing a service order type and information in the selected field of the service order with the set of predefined criteria that indicates the service order is likely to cause an unnecessary dispatch;

in response to determining that [if] the service order type and information in the selected field of the service order meet the set of predefined criteria, [then] further examining [examine] the service order to determine whether the dispatch is unnecessary;

in response to determining that [if] the dispatch is unnecessary, [then determine] determining whether the dispatch of a service technician associated with the dispatch order in the queue is scheduled to occur within a predetermined time period; and

in response to determining that [if] the dispatch is scheduled to occur within the predetermined time period, [then communicate] communicating with the work management center to place the dispatch order on hold and communicate with the service order control system to generate the corrected service order.

#### ***Reasons for Allowance***

3. Claims 2-6, 9-11, 13-16, 18-22, 24-25, 27, and 30-31 are allowed.
4. The following is an examiner's statement of reasons for allowance: None of the prior art of record, taken individually or in any combination, teach, inter alia, both a work management center and a trap service order system, wherein when a service order is received, a work management center receives a first copy of the service order, determines that a dispatch is necessary, and generates a dispatch order and a trap service order system that receives a duplicate of the service order and, once the work management center places the dispatch order in queue for execution, the trap service order system compares the duplicate service order to predefined criteria based on the source of the request of the service order to determine if the dispatch is unnecessary.



The prior art references most closely resembling the Applicant's claimed invention are Storch et al. (U.S. 5,920,846), MAX (NYNEX Science and Technology Center, disclosed in the articles "NYNEX cuts operational costs in 40 offices using expert system" from PR Newswire, "Rhyme and Reason: Artificial Intelligence in the public network" by Karpinski, and "AAAI's twenty-one best expert systems applications" from Intelligent Software Strategies), and Pruett et al. (U.S. 5,953,389).

First, Storch et al. discloses that a service order is generated for a customer through a computer order entry system. At the time of generation of the service order, the customer is assigned an available appointment date and time from current records of the availability of the outside technicians in a specific geographic area. This initial appointment is assigned using time estimated based on the type of trouble reported and estimates of the time this trouble normally takes. The initial appointment is queued and ready to be performed. In a subsequent phase of the system, the assignment of the initial appointment is more thoroughly reviewed to determine a more accurate time estimate for the appointment and if the dispatch of the outside technician is truly necessary. If it is determined that the technician's dispatch is unnecessary, the dispatch is suspended and the service order is set to auto-complete (i.e. completely remotely). However, while Storch et al. discloses a first and a second tier review of the service order, Storch et al. does not disclose both a first copy and a duplicate copy of a service order, wherein the duplicate service order is received by a trap service order system and, once a dispatch order is placed in queue for execution based on the first copy of the service order, the trap service order system compares the duplicate service order to predefined criteria based on the source of the request of

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the service order to determine if the dispatch is unnecessary. Storch et al. does not discuss both a first and a duplicate copy of the service order.

MAX discloses using an expert system called Maintenance Administrator Expert (MAX) to diagnose problems with telephone service to increase the accuracy of technician dispatches. The expert system reviews troubles reported by customers and compares the trouble to rules stored in the system's knowledge base. These rules indicate when a trouble report is likely to cause an unnecessary dispatch of a technician. If it is determined that the trouble report does meet this set of rules, then the dispatch of a technician is determined to be unnecessary for the trouble report. However, while MAX discloses using a knowledge base to determine if a dispatch is necessary, MAX does not disclose initially determining by a work management center that a dispatch for the service order is necessary, thus generating a dispatch order, and then, using a duplicate of the service order, determining by a second part of the system that the dispatch is unnecessary. MAX determines up front whether a dispatch is necessary or not, and does not make this determination in two stages.

Finally, Pruett et al. discloses a system that receives and processes trouble reports and work requests are received from either internal or external sources. The system comprises both a first automatic service order processing system, that initially receives the service request from a customer and assigns first facilities to perform the customer request, and a second automatic service order system, that receives the provisional request from the first system and then assigns second facilities to execute the service request. Functions associated with the system include repair answering, testing, screening, analysis, dispatch when necessary, field technician support, and trouble completion. The system determines whether the reported trouble requires dispatch or

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whether it can be corrected by the Caseworker remotely. As a result, no additional testing or dispatch of technicians is necessary. However, Pruett et al. does not disclose both a first copy and a duplicate copy of a service order, wherein the duplicate service order is received by a trap service order system and, once a dispatch order is placed in queue for execution based on the first copy of the service order, the trap service order system compares the duplicate service order to predefined criteria based on the source of the request of the service order to determine if the dispatch is unnecessary. Pruett et al. does not discuss both a first and a duplicate copy of the service order being separately sent to the two systems.

5. Any comments considered necessary by the Applicant must be submitted by no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statements for Reasons for Allowance".

### *Conclusion*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Sisley et al. (U.S. 5,467,268) discloses a dispatcher determining which technicians should be assigned to a new service call based on the characteristics of the call, the customer's contract requirements, the dynamic call load among the technicians, etc. The call is placed in an area "pending" for a particular technician, until the order is actually committed to a technician.

Kardos et al. (U.S. 6,345,281) discloses a resource management system that assigns field technicians to orders.

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Babayev et al. (U.S. 5,615,121) teaches scheduling service providers to perform customer service requests and determining the preferred time interval associated with the service request.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Beth Van Doren whose telephone number is (571) 272-6737.

The examiner can normally be reached on M-F, 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on (571) 272-6729. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



bvd

August 2, 2006